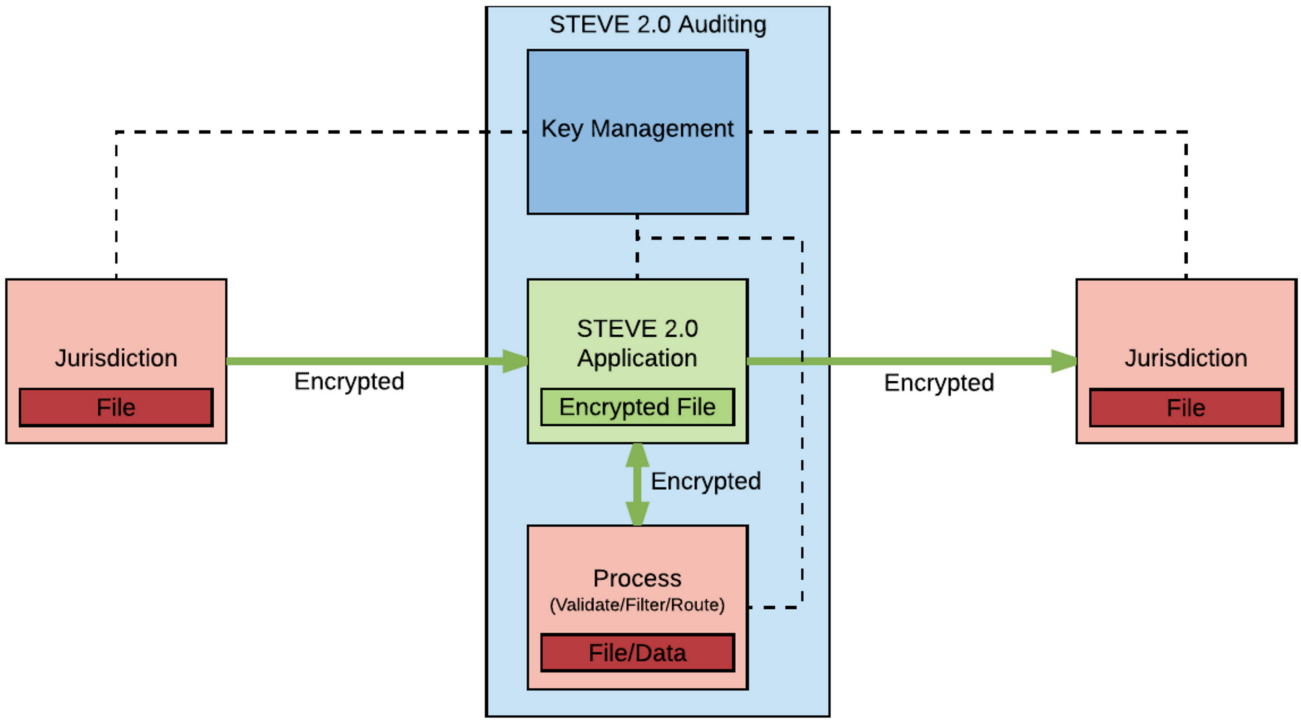
NAPHSIS, along with its stakeholders and partners, has initiated the development of the next version of the State and Territorial Exchange of Vital Events system (STEVE). STEVE 2.0 is an effort to keep what works best about STEVE 1.0 and provide additional functionality, flexibility, security, and the ability to grow along with partners it serves.

Data Flow

STEVE 2.0 will have the option of using a browser-based interface or a combination browser-based interface along with a STEVE 2.0 Client Application for transmitting data. Additional transport protocols include: PHINMS, IHE XDR, Direct, SFTP, FHIR, and Amazon S3.

Clients and Administrators may utilize the browser-based only solution to upload files to transmit, determine who they want to transmit to, and apply transformations and filters based on the file type (filters can be defined globally, per trading partner, or per user).

If the STEVE 2.0 Client Application is installed locally, then files may be routed, transformed, and filtered when the file is placed into the appropriate application folder structure using the configuration applied in the browser-based interface.



Data Protection

All data in transit and at rest WILL BE encrypted. Vital Records will be encrypted with the key of the next recipient/system upon submission to STEVE 2.0 and will only be decrypted in-process when validation/filtering/routing occurs. The use of and access to all encryption keys are audited within STEVE 2.0. Cyclic automated replacement of application server cluster instances provide further protection.

Highlights of the browser-based interface

- **Dashboard** - Displays statistics about file transfer including files sent and received with various metadata components.
- **User Management** - Allows management of users for trading partners, or within a trading partner, dependent on the role of the user.
- **Alerts** - Allows users to subscribe to system level alerts for a trading partner.
- **Transport Services** - Allows an Administrator to configure the transport services for a trading partner.
- **Format Definition Configuration** - Allows an Administrator to configure the various formats that are supported by the system. The format definitions are used for validation of files.
- **Routing Configuration** - Allows an Administrator to configure the routing mechanisms available.
- **Message Transformation Configuration** - Allows an Administrator to configure the transformations for a trading partner which converts the files from one format to another. Additionally, it allows trading partners the ability to filter out certain fields or contents.
- **File Management** - Allows data to be sent and received via the client application as well as the file management function of the Client User Interface Dashboard. All files sent and received are tracked and logged under File Management.

Highlights of the STEVE 2.0 Client Application

- **Transport Auditing** - Allows for fully audited file transport from the point where the file is made available for transmission by the sender to when it is delivered to the recipient's system.
- **Centralized Configuration** - Allows configuration of the local application from the central, browser-based interface.
- **Automated Transfers** - Allows automatic transmission and retry of files placed in the applications folder structure.
- **Highly Scalable** - Allows for automatic scaling at both the trading partner and STEVE 2.0 platform sides.

Security and Compliance Features

- Auditing and Logging
- Multi-layer, Key Based Encryption
- File Transmission Monitoring
- Real-time Alerting and Notifications
- Continuous Monitoring and Integration
- HIPAA Compliant Environment
- FISMA Moderate Authorization to Operate
- NIST 800
- Others

STEVE 2.0 will be hosted in one of the most secure data centers in the world. Funded by the CDC and maintained by Ruvos, LLC in partnership with the Association of Public Health Laboratories (APHL), the APHL Informatics Messaging Services (**AIMS**) Platform will provide hosting and transportation services for STEVE 2.0. Since moving into production in 2008, the AIMS Platform has grown to what many consider a healthcare data exchange hub of national significance. The services offered help facilitate data exchange, translation or transformation, and hosting for more than 80 trading partners, including the Office of the National Coordinator for Health Information Technology (ONC), the Mayo Clinic, Cerner Corporation, Quest Laboratories, Pathology Associates Medical Laboratories (PAML) and in all 50 state public health departments. In addition, the AIMS Platform is being piloted as the future Public Health Community Platform (PHCP) for the United States. Incorporating STEVE 2.0 into this existing, highly secure, environment provides a key component and service towards the progress of true national healthcare data exchange.